

U.S. Department
of Transportation

United States
Coast Guard



Commanding Officer
U. S. Coast Guard
Civil Engineering Unit Oakland

2000 Embarcadero
Suite 200
Oakland, CA 94606-5337
(510) 535-7200

5090
10 March 1994

Ms. Juliet Shin
Alameda County
UST Local Oversight Program
80 Swan Way, Rm. 200
Oakland, CA 94621

Dear Ms. Shin:

Find enclosed, for your review and comments, the fourth and last Quarterly Monitoring Well Sampling and Analysis for the Swimming Pool and the Exchange Center locations at the U.S. Coast Guard Support Center Alameda, Coast Guard Island, Alameda, CA.

This submittal completes the preliminary investigation to determine level of contaminants as per your letter of July 14 1993, and addresses your concerns indicated in your letter of October 7, 1993.

Based on the present analytical results observed at both sites, the Coast Guard will conduct additional testing of the groundwater one year from now to determine if any incremental changes, posing danger to the beneficial uses of the groundwater, have occurred at the sites. Should these results exceed acceptable limits, the Coast Guard shall notify and consult the Regional Board to determine further action.

The point of contact for this matter is Mr. Louis Rivero at (510) 535-7275.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph M. Sabel".

JOSEPH M. SABEL
Chief Environmental Division
U.S. Coast Guard
By direction of the Commanding Officer

- Encl: (1) Quarterly Monitoring Well Sampling and Analysis, Exchange Center Location.
(2) Quarterly Monitoring Well Sampling and Analysis, Swimming Pool Location

QUARTERLY MONITORING WELL
SAMPLING AND ANALYSIS

FOR THE

U.S. COAST GUARD SUPPORT CENTER
EXCHANGE CENTER LOCATION
COAST GUARD ISLAND
ALAMEDA, CALIFORNIA

PREPARED FOR THE

U.S COAST GUARD SUPPORT CENTER
CIVIL ENGINEERING UNIT
2000 EMBARCADERO, SUITE 200
OAKLAND, CALIFORNIA 94606-5337



Professional Service Industries, Inc.

February 15, 1994

U.S. Coast Guard Support Center
Civil Engineering Unit
2000 Embarcadero, Suite 200
Oakland, CA. 94606-5337

Attention: Mr. Louis Rivero

Subject: QUARTERLY MONITORING WELL SAMPLING & ANALYSIS

Project: Exchange Center Location
Coast Guard Island
Alameda, CA 94606
Project No. 582-34006

Dear Mr. Rivero:

Professional Service Industries, Inc. (PSI), San Francisco Field Services Division is pleased to present the fourth quarter monitoring well sampling and analysis results. A description of the sampling and laboratory analysis for the five monitoring wells located at the Exchange Center Location (see Figure 1, Vicinity Map, Figure 2, Site Plan and Figure 3, Monitoring Well Location Map) are contained herein.

Field activities were conducted on January 31, 1994. The purpose of this program is to monitor hydrocarbon concentrations in the groundwater below the site. This is the fourth and final groundwater sampling event under the scope of work.

SAMPLING METHOD

Groundwater elevations were measured prior to and after development. The five monitoring wells were redeveloped in order to establish a flow of groundwater into the wells and to remove any longstanding water. Well redevelopment was accomplished by means of a stainless steel bailer. Approximately 8 to 10 gallons of water (3 to 4 casing volumes) were removed from each well prior to sampling. The purged groundwater from the wells was contained in labelled 55-gallon drums and left on-site for future storage during additional sampling. After allowing the wells to recharge, groundwater samples were collected.

Prior to redevelopment and sampling from the wells, the bailer was cleaned using trisodium phosphate solution and triple-rinsed with potable water. Water samples were drained from the bailer into certified clean, 40 ml vials, with care being taken to eliminate headspace. The vials were labelled and placed into cold storage until delivery to a state certified laboratory for analysis. Additionally, hydrochloric acid was used to preserve samples. Proper chain-of-custody procedures were observed. Chain-of-custody is included with the attached analytical results.

OBSERVATIONS

No odor was evident and color was clear in each of the wells.

Note: See Appendix B Table I, Groundwater Elevation Data.

LABORATORY ANALYSES

The groundwater samples were submitted to Sequoia Analytical of Concord, California, Laboratory Certificate #1271, and analyzed for Aromatic Volatile Organics by EPA Method 8020 and Total Petroleum Hydrocarbons for Gasoline (TPHG), Method 8015, using gas chromatography with photoionization detection. The analytical results are summarized below. The complete laboratory report, including analytical results, QA/QC data, and chain-of-custody is attached.

SUMMARY OF ANALYTICAL RESULTS
FOURTH QUARTER GROUNDWATER MONITORING *

<u>Well Number</u>	<u>Date of Sample</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylenes</u>	<u>Purgeable Hydrocarbons</u>
MW-1EX	4/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
	7/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
	10/20/93	N.D.	N.D.	N.D.	N.D.	N.D.
	1/31/94	ND.	N.D.	N.D.	N.D.	N.D.
MW-2EX	4/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
	7/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
	10/20/93	N.D.	N.D.	N.D.	N.D.	N.D.
	1/31/94	ND.	N.D.	N.D.	N.D.	N.D.
MW-3EX	4/8/93	30	N.D.	N.D.	N.D.	6,000
	7/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
	10/20/93	N.D.	N.D.	N.D.	N.D.	N.D.
	1/31/94	ND.	N.D.	N.D.	N.D.	N.D.
MW-4EX	4/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
	7/8/93	8.8	N.D.	N.D.	N.D.	N.D.
	10/20/93	N.D.	N.D.	N.D.	N.D.	2,700
	1/31/94	ND.	N.D.	N.D.	N.D.	1,400
MW-5EX	4/8/93	14	0.63	N.D.	1.5	170
	7/8/93	3.7	4.6	N.D.	170	4,300
	10/20/93	N.D.	N.D.	N.D.	N.D.	N.D.
	1/31/94	ND.	N.D.	N.D.	N.D.	N.D.

* All concentrations are in parts per billion (micrograms per liter, ug/l)
N.D. Analytes reported as not detected above the analytical reporting limit.

DISCUSSION OF RESULTS

Based on the analytical results for this sampling event, it appears that purgeable hydrocarbons, and benzene, toluene, ethylbenzene, and xylenes (BTEX) in the groundwater beneath the site are not above the analytical reporting limits in MW-1EX, MW-2EX, MW-3EX, and MW-5EX.

A decrease in purgeable hydrocarbons was found in MW-4EX from a 2,700 ug/l reading in the October 20, 1993 sampling event to 1,400 ug/l in the recent January 31, 1994 sample. Excluding this result, non-detectable levels have been reported for all constituents in MW-1EX through MW-5EX for two consecutive quarters.

Groundwater was determined to flow in a southwesterly direction although groundwater direction and gradient appears to have been influenced by the recent storm events of January 22 through 27, 1994. Due to its close proximity to the San Francisco Bay, groundwater may be influenced by tidal action.

LIMITATIONS OF INVESTIGATION

Our investigation was performed using the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental consultants practicing in this or similar localities. The samples collected and used for testing and observations made are believed representative of site conditions. No other warranty, expressed or implied, is made to conclusions and professional advice included in this report.

This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the proper authorities and/or regulating agencies.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties.

In addition, changes in applicable or appropriate standards may occur from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should be updated as changes may occur.

The opportunity to be of service is appreciated. Should you have any questions regarding the content of this report, or we can be of further assistance, please do not hesitate to contact us.

Sincerely,

Professional Service Industries, Inc.
San Francisco Field Services



Richard S. Dreessen, Jr., CEG
Branch Manager

RD/lw

APPENDICES

APPENDIX A
FIGURES

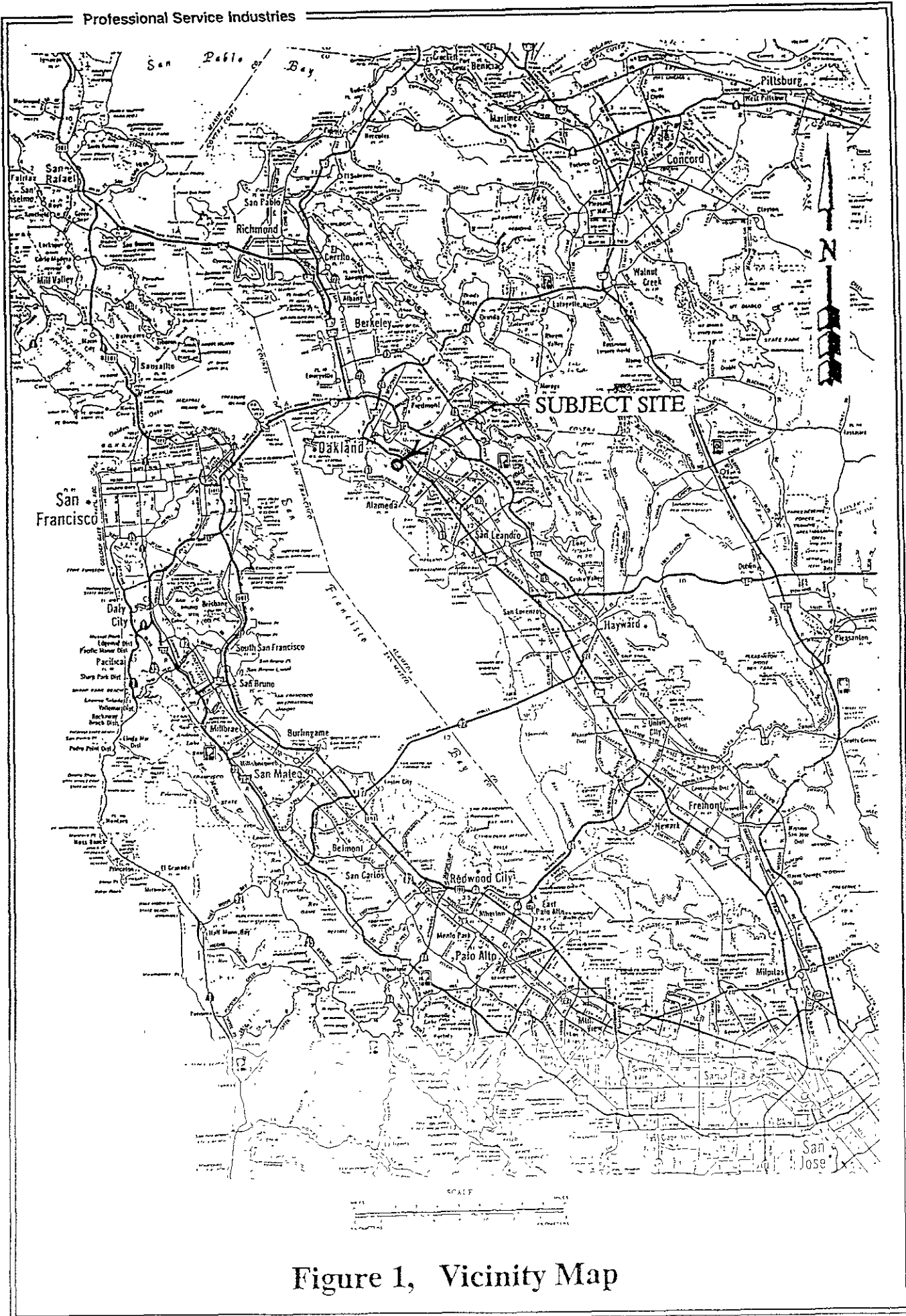


Figure 1, Vicinity Map

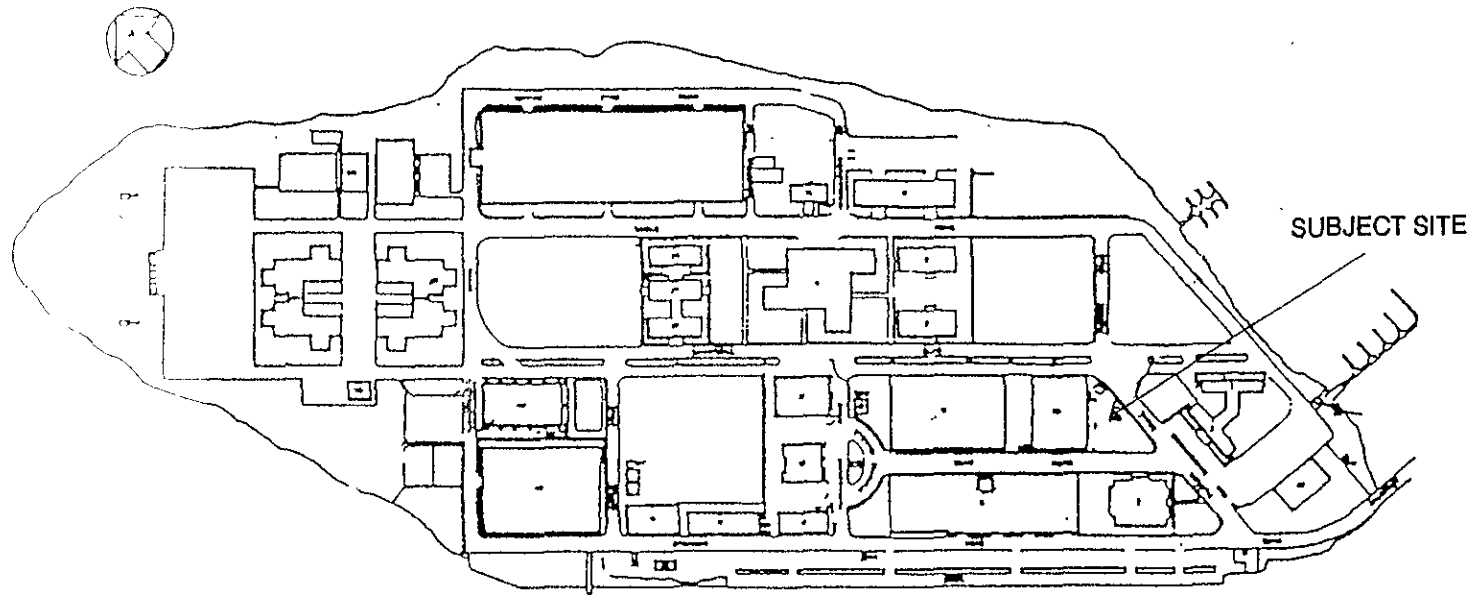
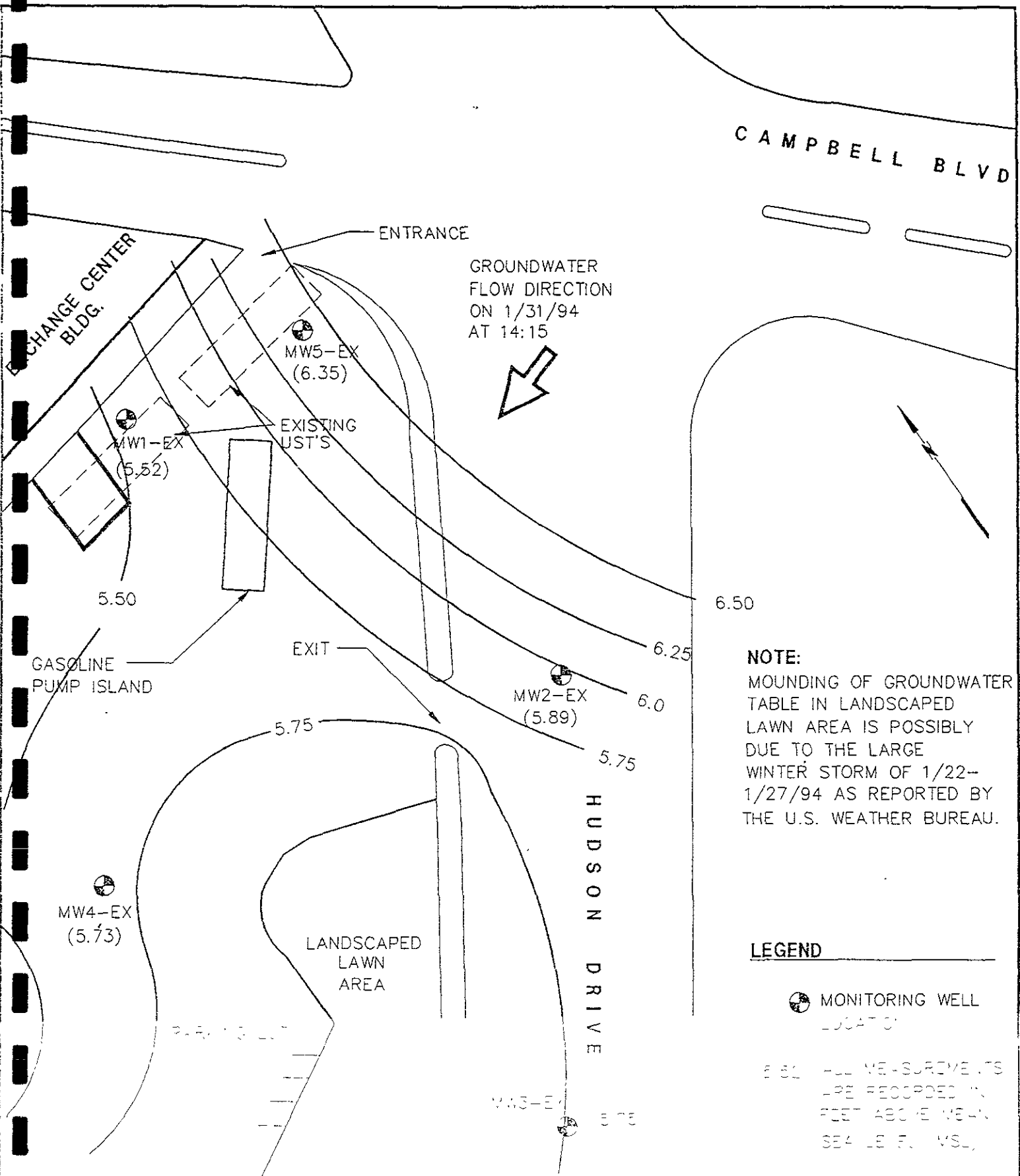


FIGURE 2, SITE PLAN



CAMPBELL BLVD

EXCHANGE CENTER BLDG.

ENTRANCE

GROUNDWATER FLOW DIRECTION ON 1/31/94 AT 14:15



MW5-EX (6.35)

MW1-EX (5.52)

EXISTING UST'S

5.50

6.50

GASOLINE PUMP ISLAND

EXIT

MW2-EX (5.89)

6.25

5.75

6.0

5.75

HUDSON DRIVE

MW4-EX (5.73)

LANDSCAPED LAWN AREA

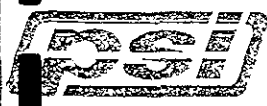
NOTE:

MOUNDING OF GROUNDWATER TABLE IN LANDSCAPED LAWN AREA IS POSSIBLY DUE TO THE LARGE WINTER STORM OF 1/22-1/27/94 AS REPORTED BY THE U.S. WEATHER BUREAU.

LEGEND

MONITORING WELL LOCATION

ALL MEASUREMENTS WERE RECORDED IN FEET ABOVE MEAN SEA LEVEL (MSL)



PROFESSIONAL SERVICE INDUSTRIES, INC.
 3700 MT. Diablo Blvd, Suite 240, Lafayette, CA 94549
 (510) 284-3070

PROJECT NAME:	U.S. COAST GUARD ALAMEDA, CA	DATE:	2/94
TITLE:	GROUNDWATER CONTOUR MAP	DWG NO.:	34006-JA
FIGURE NO.:	3	PROJ NO.:	582-34006
		DRAWN BY:	NIMAN
		APP'D BY:	M. CASTERSON
		SCALE:	NOT TO SCALE

APPENDIX B
GROUNDWATER ELEVATION DATA

TABLE I
GROUNDWATER ELEVATION DATA*

<u>Well Number</u>	<u>Surface Casing Elevations</u>	<u>Date/Time of Measurement</u>	<u>Depth to Water Meas. in ft.</u>	<u>Water Level Elev. (MSL)</u>
MW-1EX	13.72	4/5/93/15:05	7.95	5.77
		7/8/93/11:45	8.20	5.52
		10/20/93/14:25	8.60	5.12
		1/31/94/14:15	8.20	5.52
MW-2EX	13.74	4/5/93/16:40	8.00	5.74
		7/8/93/11:25	8.20	5.54
		10/20/93/14:31	8.65	5.09
		1/31/94/14:19	7.85	5.89
MW-3EX	13.50	4/8/93/09:00	8.00	5.50
		7/8/93/11:05	8.10	5.40
		10/20/93/14:33	8.50	5.00
		1/31/94/14:23	7.75	5.75
MW-4EX	13.38	4/8/93/10:50	7.95	5.43
		7/8/93/10:50	8.00	5.38
		10/20/93/14:36	8.35	5.03
		1/31/94/14:27	7.65	5.73
MW-5EX	13.98	4/8/93/12:36	8.00	5.98
		7/8/93/10:30	8.55	5.43
		10/20/93/14:44	8.85	5.13
		1/31/94/14:31	7.63	6.35

* MSL, Mean Sea Level

APPENDIX C
LABORATORY RESULTS AND
CHAIN OF CUSTODY



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

P.S.I.	Client Project ID: USCG	Sampled: Jan 31, 1994
730 Mt. Diablo Blvd., Ste 345	Sample Matrix: Water	Received: Jan 31, 1994
Lafayette, CA 94549	Analysis Method: EPA 5030/8015/8020	Reported: Feb 14, 1994
Attention: Rick Dreesen	First Sample #: 401-1507	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 401-1507 MW-1-EX	Sample I.D. 401-1508 MW-2-EX	Sample I.D. 401-1509 MW-3-EX	Sample I.D. 401-1510 MW-4-EX	Sample I.D. 401-1511 MW-5-EX
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	1,400	N.D.
Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.5	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	Discrete Peak	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	2/9/94	2/9/94	2/9/94	2/10/94	2/9/94
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	102	104	103	106	103

Purgeable hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

P.S.I.
3730 Mt. Diablo Blvd., Ste 345
Lafayette, CA 94549
Attention: Rick Dreesen

Client Project ID: USCG
Matrix: Liquid

QC Sample Group: 4011507-11

Reported: Feb 14, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	4011507	4011507	4011507	4011507
Date Prepared:	2/9/94	2/9/94	2/9/94	2/9/94
Date Analyzed:	2/9/94	2/9/94	2/9/94	2/9/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	105	100	100	100
Matrix Spike Duplicate % Recovery:	105	100	100	103
Relative % Difference:	0.0	0.0	0.0	2.9

LCS Batch#:	1LCS020994	1LCS020994	1LCS020994	1LCS020994
Date Prepared:	2/9/94	2/9/94	2/9/94	2/9/94
Date Analyzed:	2/9/94	2/9/94	2/9/94	2/9/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	106	106	106	110

% Recovery Control Limits:	71-133	72-128	72-130	71-120
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Please Note

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL


Karen L. Enstrom
Project Manager

Company Name: <i>P. S. I. Inc.</i>			Project Name: <i>USCG</i>		
Address: <i>3730 Mt. Diablo Blvd. Suite 315</i>			Billing Address (if different):		
City: <i>Lafayette</i>	State: <i>CA</i>	Zip Code: <i>94549</i>			
Telephone: <i>(510) 282-3070</i> FAX #:			P.O. #:		
Report To:	Sampler:	QC Data: <input type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A			

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 Time: 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Analyses Requested
 Drinking Water
 Waste Water
 Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested										Comments					
1. <i>MW-1 EX</i>	<i>1/31/94</i>	<i>W</i>	<i>2</i>	<i>VOA</i>		<i>B-1 ex</i>	<i>8015</i>														<i>4011507 AB</i>
2. <i>MW-2 EX</i>	↓	↓	↓	↓		↓	↓														<i>1508</i>
3. <i>MW-3 EX</i>	↓	↓	↓	↓		↓	↓														<i>1509</i>
4. <i>MW-4 EX</i>	↓	↓	↓	↓		↓	↓														<i>1510</i>
5. <i>MW-5 EX</i>	↓	↓	↓	↓		↓	↓														<i>1511</i>
6.																					
7.																					
8.																					
9.																					
10.																					

Relinquished By: <i>Robert Kingpin</i>	Date: <i>1/31/94</i>	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>Melissa-Crease</i>	Date: <i>1/31/94</i>	Time: <i>4:25 pm</i>

SENT BY: SEQUOIA-CONCORD. : 2-15-94 : 8:15 :
 Pink - Client
 Yellow - Sequoia
 White - Sequoia
 5106869689-H-K SF 510-204-3154 : # 4

APPENDIX D
GROUNDWATER SAMPLING DATA

